

Recovery Plan Action Status

Plan Name: Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area

Plan Status: Final

Plan Date: 30-Sep-98

Lead Agency: USFWS

Lead Office: Sacramento Fish And Wildlife Office

(916)

414-6600)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Bay checkerspot butterfly (Euphydryas editha bayensis), Tiburon mariposa lily (Calochortus tiburonensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Pennell's bird's-beak (Cordylanthus tenuis ssp. capillaris), San Mateo woolly sunflower (Eriophyllum latilobum), Coyote ceanothus (Ceanothus ferrisiae), White-rayed pentachaeta (Pentachaeta bellidiflora), Presidio clarkia (Clarkia franciscana), Fountain thistle (Cirsium fontinale var. fontinale), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Marin dwarf-flax (Hesperolinon congestum), Tiburon jewelflower (Streptanthus niger), San Mateo thormint (Acanthomintha obovata ssp. duttonii), Santa Clara Valley dudleya (Dudleya setchellii)	2	1.1	Establish cooperative programs with participants from the public and private sector	Ongoing Not Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, California Department of Fish and Game	Other: Information and Education	Internal Technical Assistance	Cooperative program established with Stuart Weiss and San Mateo Parks for reintroduction of Bay Checkerspot into Edgewood Park.

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Bay checkerspot butterfly (Euphydryas editha bayensis), Presidio clarkia (Clarkia franciscana)	1	2.1.1	Secure and protect serpentine habitat in the Oakland Hills for multiple species	Not Started			East Bay Regional Park District, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Technical Assistance	

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Bay checkerspot butterfly (Euphydryas editha bayensis), Fountain thistle (Cirsium fontinale var. fontinale), Marin dwarf-flax (Hesperolinon congestum), San Mateo thornmint (Acanthomintha obovata ssp. duttonii)	1	2.1.11	Secure and protect serpentine habitat on Pulgas Ridge (San Mateo County) for multiple species	Not Started			California Department of Transportation, San Francisco Water Department, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	
Bay checkerspot butterfly (Euphydryas editha bayensis), White-rayed pentachaeta (Pentachaeta bellidiflora), Fountain thistle (Cirsium fontinale var. fontinale), San Mateo thornmint (Acanthomintha obovata ssp. duttonii)	1	2.1.13	Secure and protect serpentine habitat in Triangle area (San Mateo County) for multiple species	Not Started			California Department of Transportation, San Francisco Water Department, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	

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Bay checkerspot butterfly (Euphydryas editha bayensis), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.17	Secure and protect serpentine habitat in Calero Reservoir (Santa Clara County) for multiple species	Not Started			City of San Jose, California, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Easement	Internal Field Assistance	
Bay checkerspot butterfly (Euphydryas editha bayensis), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.18	Secure and protect serpentine habitat in Calero County Park (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service	Acquisition: Easement	Internal Field Assistance	Nature and extent of actions needed not yet known
Bay checkerspot butterfly (Euphydryas editha bayensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Coyote ceanothus (Ceanothus ferrisiae), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.20	Secure and protect serpentine habitat in Kirby area (S. of Metcalf Rd.) (Santa Clara County) for multiple species	Ongoing Current	FY 1995 - FY 1999		City of San Jose, California, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Other	Internal Field Assistance	
Bay checkerspot butterfly (Euphydryas editha bayensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.21	Secure and protect serpentine habitat in Metcalf area (N. of Metcalf Rd.) (Santa Clara County) for multiple species	Ongoing Current	FY 2000 - FY 2004		City of San Jose, California, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Management: Planning	Internal Field Assistance	2005-548 acres purchased by VTA, managed by Santa Clara Co Open Space Authority. Mapping, containment and control of barbed goat grass.
Bay checkerspot butterfly (Euphydryas editha bayensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus)	1	2.1.22	Secure and protect serpentine habitat in San Felipe area (Santa Clara County) for multiple species	Not Started			City of San Jose, California, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Easement	Labor type not yet selected	250 acres 15 to be put aside as part of development along 101.

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Bay checkerspot butterfly (Euphydryas editha bayensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.26	Secure and protect serpentine habitat west of San Martin area (including Hayes Valley / Lions Peak) (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Easement	Internal Field Assistance	
Bay checkerspot butterfly (Euphydryas editha bayensis), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.27	Secure and protect serpentine habitat in Santa Teresa Hills (Santa Clara County) for multiple species	Not Started			City of San Jose, California, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Easement	Internal Field Assistance	
Bay checkerspot butterfly (Euphydryas editha bayensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.28	Secure and protect serpentine habitat on Tulare Hill (Santa Clara County) for multiple species	Ongoing Current	FY 1995 - FY 1999		City of San Jose, California, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Easement	Internal Field Assistance	
Bay checkerspot butterfly (Euphydryas editha bayensis), Marin dwarf-flax (Hesperolinon congestum)	2	2.1.9	Secure and protect serpentine habitat at Buri Buri Ridge (Santa Clara County) for multiple species	Not Started			San Francisco Water Department, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	

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Bay checkerspot butterfly (Euphydryas editha bayensis)	2	2.2.16	Restore and protect historic habitat on San Bruno Mountain (San Mateo County) for bay checkerspot butterfly; reintroduce the species	Ongoing Current	FY 2008		San Mateo County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	Restoration of habitat on SBM is ongoing. Goal is to restore grasslands and prevent further succession of habitat to scrub.
Bay checkerspot butterfly (Euphydryas editha bayensis)	2	2.2.18	Secure and protect serpentine habitat in Carlyle Hills (south of Gilroy in southern tip of Santa Clara County) for multiple species	Not Started			U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	
Bay checkerspot butterfly (Euphydryas editha bayensis), Santa Clara Valley dudleya (Dudleya setchellii)	2	2.2.19	Secure and protect serpentine habitat in Chesbro Reservoir area (west of Morgan Hill)(Santa Clara County) for multiple species	Not Started			U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	
Bay checkerspot butterfly (Euphydryas editha bayensis)	2	2.2.20	Secure and protect serpentine habitat East of San Martin (Santa Clara County) for bay checkerspot butterfly	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Easement	Internal Field Assistance	Nature and extent of actions needed not yet known
Bay checkerspot butterfly (Euphydryas editha bayensis)	1	2.2.22	Secure and protect serpentine habitat near Guadalupe Reservoir (south of) (Santa Clara County) for multiple species	Not Started			Midpeninsula Regional Open Space District, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	Precise extent and locations need clarification
Bay checkerspot butterfly (Euphydryas editha bayensis)	2	2.2.25	Secure and protect serpentine habitat in Uvas Reservoir area (west of San Martin) (santa Clara County) for bay checkerspot butterfly	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Easement	Internal Field Assistance	

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Bay checkerspot butterfly (Euphydryas editha bayensis)	3	2.2.6	Secure and protect serpentine habitat in the Franklin Canyon area for bay checkerspot butterfly	Not Started			Contra Costa County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	
Bay checkerspot butterfly (Euphydryas editha bayensis)	3	2.2.8	Secure and protect serpentine habitat in the Morgan territory area for bay checkerspot butterfly	Not Started			Contra Costa County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	

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Bay checkerspot butterfly (Euphydryas editha bayensis), San Mateo thormmint (Acanthomintha obovata ssp. duttonii)	3	4.2.26	Conduct surveys in historic and potential habitat in Redwood City area (east of Woodside) (San Mateo County) for multiple species	Not Started			U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	

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Bay checkerspot butterfly (Euphydryas editha bayensis), White-rayed pentachaeta (Pentachaeta bellidiflora)	3	4.2.28	Conduct surveys in historic and potential habitat at San Bruno Mountain (San Mateo County) for multiple species	Not Started			U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	
Bay checkerspot butterfly (Euphydryas editha bayensis)	2	4.2.37	Conduct surveys in historic and potential habitat Loma Prieta area (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	
Bay checkerspot butterfly (Euphydryas editha bayensis)	2	4.2.39	Conduct surveys in historic and potential habitat in New Almaden area (Santa Clara County) for multiple species	Not Started			Midpeninsula Regional Open Space District, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	
Bay checkerspot butterfly (Euphydryas editha bayensis), Presidio clarkia (Clarkia franciscana)	2	4.2.5	Conduct surveys in historic and potential habitat in the Oakland Hills (Alameda County) for multiple species	Not Started			East Bay Regional Park District, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	
Bay checkerspot butterfly (Euphydryas editha bayensis)	3	4.2.6	Conduct surveys in historic and potential habitat in Franklin Canyon (Contra Costa County) for bay checkerspot butterfly	Not Started			California Department of Parks and Recreation, East Bay Regional Park District, U.S. Fish and Wildlife Service	Research: Population Surveys	Internal Field Assistance	
Bay checkerspot butterfly (Euphydryas editha bayensis)	3	4.2.7	Conduct surveys in historic and potential habitat in Morgan Territory (Contra Costa County) for bay checkerspot butterfly	Not Started			California Department of Parks and Recreation, East Bay Regional Park District, U.S. Fish and Wildlife Service	Research: Population Surveys	Graduate Student	
Bay checkerspot butterfly (Euphydryas editha bayensis)	3	4.2.8	Conduct surveys in historic and potential habitat in Mt. Diablo State Park (Contra Costa County) for multiple species	Not Started			California Department of Parks and Recreation, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	

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Bay checkerspot butterfly (Euphydryas editha bayensis), San Mateo woolly sunflower (Eriophyllum latilobum), White-rayed pentachaeta (Pentachaeta bellidiflora), Fountain thistle (Cirsium fontinale var. fontinale), Marin dwarf-flax (Hesperolinon congestum), San Mateo thornmint (Acanthomintha obovata ssp. duttonii)	1	5.17	Conduct surveys in historic and potential habitat on San Francisco Peninsula (south of Presidio) (San Francisco County) for Hesperolinon congestum	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service	Research: Environmental Contaminants	Graduate Student	

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Bay checkerspot butterfly (Euphydryas editha bayensis)	2	5.21	conduct necessary research at Jasper Ridge (Santa Clara County) for bay checkerspot butterfly	Discontinued	FY 2000 - FY 2004		Stanford University, U.S. Fish and Wildlife Service	Research: Habitat Status	Graduate Student	2002-2003 Nitrogen deposition research.
Bay checkerspot butterfly (Euphydryas editha bayensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Coyote ceanothus (Ceanothus ferrisiae), Fountain thistle (Cirsium fontinale var. fontinale), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Santa Clara Valley dudleya (Dudleya setchellii)	1	5.24	Conduct research on vegetation management methods in selected areas county-wide (Santa Clara County) for multiple species	Ongoing Current	FY 2000 - FY 2004		Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Habitat Requirements	Graduate Student	

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Bay checkerspot butterfly (<i>Euphydryas editha bayensis</i>), Metcalf Canyon jewelflower (<i>Streptanthus albidus</i> ssp. <i>albidus</i>), Coyote ceanothus (<i>Ceanothus ferrisiae</i>), Fountain thistle (<i>Cirsium fontinale</i> var. <i>fontinale</i>), Tiburon paintbrush (<i>Castilleja affinis</i> ssp. <i>neglecta</i>), Santa Clara Valley dudleya (<i>Dudleya setchellii</i>)	1	5.25	Conduct surveys in historic and potential habitat near Niles (alameda County) for <i>Streptanthus albidus peramoenus</i>	Not Started			U.S. Fish and Wildlife Service	Research: Habitat Status	Graduate Student	
Bay checkerspot butterfly (<i>Euphydryas editha bayensis</i>), Metcalf Canyon jewelflower (<i>Streptanthus albidus</i> ssp. <i>albidus</i>), Coyote ceanothus (<i>Ceanothus ferrisiae</i>), Fountain thistle (<i>Cirsium fontinale</i> var. <i>fontinale</i>), Tiburon paintbrush (<i>Castilleja affinis</i> ssp. <i>neglecta</i>), San Mateo thornmint (<i>Acanthomintha obovata</i> ssp. <i>duttonii</i>), Santa Clara Valley dudleya (<i>Dudleya setchellii</i>)	2	5.26	Conduct necessary research at selected areas county-wide in Santa Clara County on restoring native habitats on serpentine and non-serpentine soils (multiple species)	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Habitat Requirements	Graduate Student	

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Bay checkerspot butterfly (Euphydryas editha bayensis)	3	5.41	Develop artificial rearing techniques for bay checkerspot butterfly	Not Started			California Department of Parks and Recreation, California Department of Transportation, City of San Jose, California, City of Tiburon, California, East Bay Regional Park District, Marin County Open Space District, Marin Municipal Water District, Midpeninsula Regional Open Space District, Rancho Santa Ana Botanic Garden, San Francisco Water Department, Tiburon Landmark Society, University of California at Berkeley, San Mateo County, California, Stanislaus County, California, Marin County, California, San Francisco County, California, Santa Clara County, California, Contra Costa County, California, Alameda County, California, Sonoma County, California, National Park Service, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Research: Propagation	Graduate Student	
Bay checkerspot butterfly (Euphydryas editha bayensis)	3	5.44	Conduct research on importance of nectar plants to male and female bay checkerspots in the wild	Not Started			U.S. Fish and Wildlife Service	Research: Habitat Requirements	Graduate Student	